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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,655	12/29/2005	Bayer	AP10588	9085
7590 08/10/2007				
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		EXAMINER		
		LE, DAVID D		
		ART UNIT		PAPER NUMBER
		3681		
		MAIL DATE		DELIVERY MODE
		08/10/2007		PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/536,655

Applicant(s)

BAYER ET AL.

Examiner

David D. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/27/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/536,655, filed 29 December 2005. Claims 17-32 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Foreign Priority Document, received on 05/27/05
 - Information Disclosure Statement, received on 05/27/05
 - Declaration and Power of Attorney, received on 12/29/05

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because it fails to include the all eight inventors, as indicated in the Application Data Sheet, filed on 27 May 2005. The following inventors have been excluded from the present declaration, filed on 29 December 2005:

- Wilfried Synovzik;
- Markus Kummel; and
- Andreas Margander.

Specification

4. The disclosure is objected to because of the following informalities:

- Page 7, line 21 of the substitute specification (clean version), “the sun wheels (12/13)” should be --the planetary wheels (12/13)--.
- Page 7, line 24 of the substitute specification (clean version), “the transmission casing (14)” should be --the transmission casing (17)--.
- Page 9, line 1 of the substitute specification (clean version), “transmission casing (10/14)” should be --sun wheel (14)--.
- Page 10, line 6 of the substitute specification (clean version), “the sun wheels (12/13)” should be --the planetary wheels (12/13)--.

Appropriate correction is required.

Claim Objections

5. Claim 17 is objected to because of the following informalities:

- Line 2, “vahicle” should be --vehicle--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 23, 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 23:

- Line 2 recites the limitation “its shape”. There is insufficient antecedent basis for this limitation in the claim. Furthermore, it is unclear which shape that the claimed limitation is referring to.

Claim 31:

- Claim 31 is presently dependent upon the canceled claim 14. Accordingly, the scope of claim 31 is not ascertainable.

Claim 32:

- Claim 32 is presently dependent upon the canceled claim 15. Accordingly, the scope of claim 32 is not ascertainable.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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9. **Claims 17-29 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S.**

Patent No. 6,155,376 to Cheng.

Claims 17-29:

Cheng (Figs. 1-10; column 1, line 35 – column 5, line 62) discloses a steering assembly comprising:

- A first toothed gear (i.e., Fig. 1, element 112);
- A second toothed gear (i.e., Fig. 1, element 114);
- Wherein the first toothed gear (112) is a plastic toothed gear (i.e., column 4, lines 12-15);
- Wherein the second toothed gear (114) is a metal toothed gear (i.e., column 4, lines 12-15) and inherently includes a specific elastic deformation;
- Wherein the second toothed gear (114) inherently comes into engagement after the specific elastic deformation of the first toothed gear (112);
- Wherein the first and second toothed gears produce low level of vibration/noise (i.e., column 4, lines 12-15);
- Wherein the second toothed gear (114) is inherently harder than the first toothed gear (112);
- Wherein the second toothed gear (114) is inherently more stable than the first toothed gear (112);
- Wherein the first and the second toothed gears are positioned axially offset from each other (i.e., Fig. 1);

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- Wherein the first tooled gear (112) appears to be offset radially from the second toothed gear by a positive profiled displacement (i.e., Figs. 8 and 10); and
- Wherein the steering assembly has a straight gearing (i.e., Figs. 8 and 10) and is capable of transmitting force under various conditions including the normal and overload conditions.

Note:

It should be noted that, in claim 17, the below claimed recitations are considered intended used limitations.

- Claim 17, lines 4-5 recite, in part, the limitation “is designed with reference to low noise level and assumes the transmission of force in the case of normal transmission function”; and
- Claim 17, lines 6-7 recite, in part, the limitation “is designed with reference to the transmission of force in the event of an overload of the transmission function”.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

10. Claims 17, 22, 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/09998 A1 (WO'998).

Claims 17, 22, 29 and 30:

WO'998 (i.e., Fig. 2 and abstract) discloses a steering system comprising:

- A zero backlash planetary wheel gear (i.e., Fig. 2, element 1);
- A first toothed gear (i.e., Fig. 2, being combination of elements 7, 9 and 10);
- A second toothed gear (i.e., Fig. 2, being combination of elements 2, 4 and 5);
- Wherein the first toothed gear is elastic and the second toothed gear is rigid (i.e., abstract);
- Wherein the first and second toothed gears inherently produce low level of noise (i.e., abstract);
- Wherein the second toothed gear is harder than the first toothed gear (i.e., abstract); and
- Wherein the planetary wheel gear has a straight gearing (i.e., Fig. 2) and is capable of transmitting force under various conditions including the normal and overload conditions.

Note:

It should be noted that, in claim 17, the below claimed recitations are considered intended used limitations.

- Claim 17, lines 4-5 recite, in part, the limitation “is designed with reference to low noise level and assumes the transmission of force in the case of normal transmission function”; and

- Claim 17, lines 6-7 recite, in part, the limitation “is designed with reference to the transmission of force in the event of an overload of the transmission function”.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

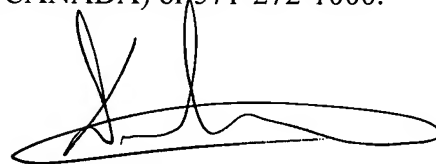
- Bayer et al. (U. S. Patent Application Publication No. US 2006/0011405 A1) teaches a superimposed steering system, as shown in Fig. 2.
- Yasui et al. (U. S. Patent No. 6,925,371) teaches a vehicle motor control apparatus, as shown in Fig. 18.
- Nelson (U. S. Patent No. 4,726,257) teaches a balanced steerable transmission, as shown in Fig. 6.
- Nelson (U. S. Patent No. 5,415,595) teaches a differential gearing, as shown in Fig. 1.
- Saito (U. S. Patent No. 5,029,659) teaches a torque detecting apparatus using a combination of plastic and metal gears, as shown in Fig. 1.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'David D. Le', with a large, sweeping horizontal stroke underneath.

David D. Le
Primary Examiner
Art Unit 3681
08/03/2007

ddl